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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,782	09/29/2003	Peter Nilsson	03370-P0046A	2485

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EXAMINER


WILLIAMS, THOMAS J

ART UNIT PAPER NUMBER

3683

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/673,782	Applicant(s) NILSSON ET AL. 	
	Examiner Thomas J. Williams	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-20 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgment is made in the receipt the amendment filed September 13, 2004, and the information disclosure statement filed September 23, 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5, 7, 8, 10-12, 14, 16, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,256,570 to Weiberle et al.

Re-claim 1, Weiberle et al. discloses an electrically controlled braking system comprising: a control unit 10/22, a first brake component 12a/12b; a second brake component 18a/18b; a first control network K1 electrically connecting the control unit and the first brake component, the first control network is adapted to transmit the control signals from the control unit to the first brake component, a second control network K2 electrically connecting the control unit and the second brake component, the second control network is adapted to transmit the control signals from the control unit to the second brake component; an auxiliary control link i_{1R} or i_{2R} is activatable to electrically connect the first brake component 12a/12b and the second brake component 18/18b only when a failure occurs in one of the first control network or the second control network, see column 3 lines 3-16, the auxiliary control link is adapted to transmit

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the control signals between the first brake component and the second brake component when the failure occurs.

Re-claims 3 and 14, the control unit is a single control unit.

Re-claim 5, a third brake component 14a/14b and a fourth brake component 16a/16b are responsive to the control signals; a second auxiliary control link i_{3R} and i_{4R} is activatable to electrically connect the third and fourth brake component when a failure occurs in one of the networks.

Re-claims 7 and 16, each brake component comprises a brake actuator and an ECU (wheel module).

Re-claims 8 and 17, the brake components, which encompass the brake actuators, are actuated by electrical force.

Re-claims 10 and 19, the control unit 101 controls an electronic brake force distribution and ABS.

Re-claims 11 and 20, control signals are transmitted over both the first control network and the second control network.

Re-claim 12, Weiberle et al. discloses an electrically controlled braking system comprising: a control unit 10/22, a plurality of pairs of brake components 12a/12b, 14a/14b, 16a/16b, 18a/18b; a first control network K1 electrically connecting the control unit and a first brake component of each pair of brake components, the first control network is adapted to transmit the control signals from the control unit to the first brake component; a second control network K2 electrically connecting the control unit and a second brake component of each pair of brake components, the second control network is adapted to transmit the control signals from

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the control unit to the second brake component; a plurality of auxiliary control links i_{1R} , i_{2R} , i_{3R} and i_{4R} activatable to electrically connect the first brake component of each pair of brake components and the second brake component of each pair of brake components only when a failure occurs in one of the first control network or the second control network, see column 3 lines 3-16, the auxiliary control links adapted to transmit the control signals between the first brake component of each pair of brake components and the second brake component of each pair of brake components only when the failure occurs.

Re-claim 18, see figure 6.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-4 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,231,133 to Tsukamoto in view of US 6,256,570 to Weiberle et al.

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Re-claim 1, Tsukamoto teaches in figure 19 an electrically controlled braking system comprising: a control unit that generates control signals (interpreted as depression sensors 101F, 101R), a first brake component (interpreted as 10F) responsive to the control signals generated by the control unit; a second brake component (interpreted as 10R) responsive to the control signals generated by the control unit; a first control network electrically connecting the control unit and the first brake component (interpreted as communication line connecting 101F and 10F), the first control network is adapted to transmit the control signals from the control unit to the first brake component, a second control network electrically connecting the control unit and the second brake component (interpreted as communication line connecting 101R and 10R), the second control network is adapted to transmit the control signals from the control unit to the second brake component; an auxiliary control link (interpreted as communication link between 10F and 10R, this link connects only the two brake components) is activatable to electrically connect the first brake component 10F and the second brake component 10R, the auxiliary control link is adapted to transmit the control signals between the first brake component and the second brake component when the failure occurs.

However, Tsukamoto fails to specifically teach that the auxiliary control link is activatable to connect the first and second brake component *only* when a failure occurs in one of the first control network or the second control network. Weiberle et al. teaches a brake system having an auxiliary communication line that electrically connects brake components only during a state of failure. It would have been obvious to one of ordinary skill in the art to have utilized the link between the brake components of Tsukamoto only when a failure is detected as taught

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by Weiberle et al., thus reducing the transmission of unneeded brake signals and ultimately reducing power consumption.

Re-claims 2 and 4, the control unit 101 comprises two control units; the control units are electrically connected with each control networks.

Re-claim 3, Tsukamoto teaches having one control unit (figure 9). It would have been obvious to one of ordinary skill in the art to have utilized one control unit as taught by Tsukamoto, thus reducing overall costs for the brake system.

Re-claim 7, the first brake component and the second brake component each comprises a brake actuator.

Re-claim 8, the brake components, which encompass the brake actuators, are actuated by electrical force.

Re-claim 9, the first brake component 10A and the second brake component 10B are on a common axle, see figure 20.

Re-claim 10, the control unit 101 controls an electronic brake force distribution.

Re-claim 11, control signals are transmitted over both the first control network and the second control network.

7. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiberle et al. in view of Tsukamoto.

Re-claims 13 and 15, Weiberle et al. fails to teach the at least one control unit as being two control units. Tsukamoto teaches an electrically operated brake system as having a control unit comprising one or two individual units. It would have been obvious to one of ordinary skill

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in the art to have provided the brake system of Weiberle et al. with dual controllers as taught by Tsukamoto, thus providing a backup to each of the controllers.

Allowable Subject Matter

8. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 21 is allowed.

Response to Arguments

10. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brandmeier et al., Zittlau and Hedenetz each teach electrically controlled brake systems having a failure responsive mode.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci, can be reached at (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

November 18, 2004

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams

AW-3683

11/18/04